What we claim is:

1. A method for acquiring images of the heart during cardiac cycles comprising:

measuring the length of at least one of said cardiac cycles prior to triggering at least one image-acquisition scan; and

triggering said image-acquisition scan at a point of said cardiac cycle having minimized motion, whereby said point is based on said cardiac cycle length.

2. A method for acquiring an image of the heart of a patient by triggering an image-acquisition scan at a point of a cardiac cycle having minimized motion, comprising:

measuring the length of the R-R interval of said cardiac cycle;

calculating the length of the R-T segment of said cardiac cycle to determine the quiescent segment of said cardiac cycle;

identifying an optimal scan starting point of said cardiac cycle ; and

triggering said image-acquisition scan at said optimal scan starting point.

3. The method of claim 2 wherein the step of calculating said R-T segment length includes determining the gender of said patient and said R-R interval length.

4. The method of claim 3 wherein the step of calculating said R-T segment length comprises applying the algorithm 0.143 X RR + 224.2, where the gender of said patient is male.

5. The method of claim 3 wherein the step of calculating said R-T segment length comprises applying the algorithm 0.157 X RR + 221.2, where the gender of said patient is female.

6. The method of claim 2 wherein said optimal scan starting point is identified in part by said R-R interval length, said R-T segment length, and the speed of said image-acquisition scan.

7. The method of claim 6 wherein the step of identifying said optimal scan starting point comprises applying the algorithm RT±X, where said X value depends on said R-R interval length and the speed of said image-acquisition scan.

8. The method of claim 2 wherein the speed of said image-acquisition scan is within the range of about 15 ms to about 75 ms.

9. The method of claim 2 wherein the speed of said image-acquisition scan is within the range of about 76 ms to about 150 ms.

10. The method of claim 2 wherein the speed of said image-acquisition scan is within the range of about 151 ms to about 225 ms.

11. The method of claim 2 wherein the speed of said image-acquisition scan is within the range of about 226 ms to about 300 ms.

12. The method of claim 2 whereby said optimal scan starting point may dynamically vary with each cardiac cycle.

13. The method of claim 12 wherein acquiring said image of the heart is independent of the consistent heart rate of said patient.

14. A cardiac imaging apparatus that acquires an image of the heart of a patient by triggering an image-acquisition scan at a point of the cardiac cycle having minimized motion comprising:

a transmitter that generates said image-acquisition scan;

an input console, whereby said input console is adapted to receive information regarding an optimal scan starting point of said cardiac cycle, and said optimal scan starting point is based in part on the length of the R-R interval of said cardiac cycle, the length of the R-T segment of said cardiac cycle, and the speed of said image-acquisition scan;

an ECG gating device that is connected to and adapted to communicate with said transmitter and said input console, whereby said gating device triggers said image-acquisition scan at said optimal scan starting point.

15. The apparatus of claim 14 wherein said ECG gating device includes software adapted to measure said R-R interval length, calculate said R-T segment length, and identify said optimal scan starting point.

16. The apparatus of claim 14 comprising a magnetic resonance imaging device.

17. The apparatus of claim 14 comprising a spiral computer tomography scanner.

18. The apparatus of claim 14 comprising an electron beam tomography scanner.

19. The apparatus of claim 15 wherein said optimal scan starting point may dynamically vary with each cardiac cycle.

20. The apparatus of claim 14 wherein said ECG gating devices receives and stores the gender of said patient.

21. The apparatus of claim 14 wherein said ECG gating device receives and stores the speed of said image-acquisition scan.

22. The apparatus of claim 14 wherein said R-T segment length is based on said R-R interval length and the gender of said patient.

23. The apparatus of claim 22 wherein said R-T segment length is calculated by the algorithm 0.143 X RR +224.2 where the patient is male.

24. The apparatus of claim 22 wherein said R-T segment length is calculated by the algorithm 0.157 X RR +221.2 where the patient is female.

25. The apparatus of claim 14 wherein said optimal scan starting point is identified by the algorithm RT±X, where said X value depends on said R-R interval length and said image-acquisition scan speed.